

Chapter 80 - Aircraft

The paramount consideration for aircraft use in California is to conduct all operations safely and reduce risk exposure.

In order to maximize IA effectiveness, the GACCs will retain operational control of all tactical aircraft.

Aircraft Administration

Bureau of Land Management

The California State Aviation Manager (SAM) is located at the California State Office. The State Aviation Manager provides guidance to 4 Unit Aviation Managers (UAM) located in Riverside, Bishop, Bakersfield and Susanville. These Unit Aviation Managers coordinate the daily fire, law enforcement and administrative aviation use in their geographical areas. All requests for incident support and administrative flights will be made through the Interagency Communication Centers identified in those geographic areas. Geographic area communication centers are as follows.

- Northern California District (NOD) - Susanville Interagency Communications Center (SIFC)

- Owens Valley District (OVD) - Owens Valley Interagency Communication Center (OVCC)

- Central California District (CND) - Central California Interagency Communications Center (CCCC)

- California Desert District (CDD) - Federal Interagency Communications Center (SBCC)

Requests for administrative flights for the California State Office are requested and processed through the State Aviation Manager in coordination with Northern California Geographic Area Coordination Center.

CAL FIRE

CAL FIRE Aviation is integrated within two organizational classifications: Aviation Management Unit (AMU) and Tactical Air Operations (TAO) both under the direction of Fire Protection. Program responsibilities overlap in many areas; the following only serve to identify accountability:

AMU:

- Aviation Policy and Procedure

- Maintenance of both fixed and rotor wing aircraft

- Aviation Life Support Equipment (ALSE)

- Aviation Safety

- Management of aviation contract personnel

 - Maintenance staff

 - Fixed wing pilots

- Management of Call When Needed (CWN) and any Exclusive Use (EU) contracts

TAO:

- Command and Control

- Fire chemicals

- Base operations and standardization

- Aviation Training and Standards of CAL FIRE personnel

- Military Program Coordination

 - Title 10 assets

 - MAFFS

 - California National Guard

- Operational technical assistance

Forest Service

The Regional Aviation Group (RAG) is divided into operational areas to better serve the Units in the region. All Units should direct requests for technical assistance to the office designated to serve them. There will be personnel at each location to assist the Units in all aspects of aviation. All requests for incident support and administrative flights will be made through the appropriate GACC.

NOPS will be the dispatch point for the McClellan Office and Redding Aviation Units. SOPS will be the dispatch point for the Lancaster Aviation Unit. Aviation Units needing assistance should make requests to the dispatch office that serves them.

Designated Operational Areas and Units served are:

Lancaster Aviation Unit - ANF, BDF, CNF, INF, LPF, SQF, SNF, STF and OSC

Redding Aviation Unit - ENF, KNF, LNF, MDF, MNF, PNF, TMU, TNF, SHF, SRF and ONC

It will be the responsibility of the Aviation Units to furnish the appropriate GACC a duty schedule during the fire season for all pilots, inspectors and aircraft status.

Fire and Aviation Safety Teams (FAST) assist agency administrators during periods of high fire activity by assessing policy, rules, regulations, and management oversight relating to operational issues. For more information reference the National Interagency Mobilization Guide, Chapter 20.

Aviation Safety Assistance Teams (ASAT) enhance safe, efficient, and effective aviation operations. An ASAT provides assistance to Unit and Aviation Managers, flight crews, and Incident Management Teams for increasing ongoing or declining incident aviation activity. For more information reference the National Interagency Mobilization Guide, Chapter 20.

National Park Service

The National Park Service Aviation program is managed at the Park level by the Fire Management Officer or Park Aviation Officer. In California there are two National Park Service Helicopters, one Type 2 Standard in Yosemite National Park and a Type 3 Standard in Sequoia and Kings Canyon National Park. The primary mission for these helicopters are wildland fire response and all hazard missions including short haul emergency extraction on a case by case basis. All requests should be routed thru unit dispatch centers. Assignment length can be negotiated with the Park Fire Management Officer or Park Aviation Officer.

Federal Cooperator Aircraft Use

Cooperator aircraft to the Forest Service and Office of Aviation Services (OAS) (state contracted, state owned, state managed National Guard aircraft, county, city, or other) may be used on federal fires under the following conditions:

- The pilot and aircraft have been approved in writing for the mission, by the Forest Service Regional Aviation Officer (RAO) or the DOI Western OAS office.
- There exists a written MOU (Memorandum of Understanding), interagency agreements or other document that authorizes their use and payment for this use.
- The cooperator aircraft will be operated within any limits on its use established in the written approval.
- The cooperator aircraft will be used only in situations where federal aircraft are not available.
- The cooperator aircraft will be released when federal aircraft becomes available.

The Federal Excess Personal Property (FEPP) is Forest Service-owned property that is on loan to State Foresters for the purpose of wildland and rural firefighting. Reference: <http://www.fs.fed.us/fire/partners/fepp/index.html>
CAL FIRE tactical aircraft are FEPP.

In the initial attack period, aircraft will be filled using the “closest resource concept”.

In the extended attack period, using cooperator-owned aircraft prior to exhausting contracted resources must involve a “significant and imminent threat to life or property”. When using a cooperator aircraft, an Incident Aircraft Certification form will be completed by the host Unit. This form will be validated by the Federal Aircraft Coordinator at the GACC and will ensure the sending Unit, the receiving unit and GACC have a completed copy. For a sample of the Incident Aircraft Certification form, refer to the California Interagency Mobilization Guide, Appendix A.

Aircraft Ordering Procedures

Initial Attack Ordering

The GACC will be notified of movement of all initial attack aircraft.

To expedite the closest available aircraft to initial attack fires, the Units will announce on the intercom when there is a status change of their Aircraft:

- Brought on early in the morning or down staffed for the evening
- Out of service mechanical and back in service
- Visibility conditions (smoke, fog, etc.)
- On a delay for any reason with expected time of delay

This procedure will increase the efficiency of the GACC to facilitate requests for aircraft especially during lightning events and periods of increased initial attack activity.

“Closest resource concept” will be followed by all agencies for IA and is defined as:

Regardless of the controlling agency, the agency resource that has the shortest timeframe to reach a predetermined incident location first will be dispatched. Established dispatch channels will be followed at all times. When multiple agency aircraft are available at a base, the agency specific aircraft will be dispatched to that agency’s incident first.

When an aircraft is on base and in the IA Zone of Influence, Units will order directly from the administering base, via the intercom for initial attack.

Requests for the aircraft when the closest base is vacant will be ordered via intercom through the GACC.

The GACC will fill orders from the most appropriate source available. The most appropriate source will be determined on the basis of urgency, resource availability, delivery time, reasonable cost effectiveness, impact on other units, and consideration of the overall fire program.

The GACCs are responsible for the strategic movement of aircraft throughout the state, as needs dictate.

The CA Interagency Aircraft Dispatch script (FC-106) will be used by all Units ordering aviation resources. Refer to California Interagency Mobilization Guide Appendix A.

The following information is required:

- Incident Name
- Order number
- Location: Descriptive location & section, township, range *and* latitude/longitude
When giving latitude and longitude use the format of degrees, decimal minutes (DD mm.mm)
- Air Tactics/Air to Air FM, repeater tone if applicable
- Victor/Air to Air AM
- Air to Ground FM, repeater tone if applicable
- Ground Tactics/FM
- Command Frequency/FM, repeater tone
- Request number
- Other Aircraft
- Hazards

Unless specified by Unit standard response plan, initial attack aircraft orders in ROSS should be ordered as:

Airtanker, Any Type
Helicopter, Type 2 Standard (with crew)
Fixed Wing, Leadplane
Fixed Wing, Air Tactical
Fixed Wing, Aerial Supervision Module (ASM)
Aircraft Group, IA smokejumper load

Aircraft call signs and ETA's will be relayed at the time of departure from the base.

Additional Aircraft Requests

Once the Aircraft identified by the initial response plan (CAD/WildCAD) have been committed, all additional requests will be placed with the GACC by ICS standard types. Additional aircraft ordered may not be the closest based on GACC operational needs.

For ICS typings, refer to the California Interagency Mobilization Guide Chapter 80, “Airtankers” and “Helicopters” sections.

Single Engine Airtankers (SEATs) may be used under the following conditions:

- Used as initial attack airtanker as long as it is the closest resource and the pilot is IA qualified.
- If pilot is not IA rated aerial supervision must be present.
- Used with other airtankers only if a Lead Plane, Air Attack or ASM is present.
- On CAL FIRE incidents, may only be used to augment Type 1, 2 and Type 3 Multi-engine Airtankers and not as a replacement.

Airtanker Dispatch Rotation

When more airtankers are available at the base than originally requested or allotted for the incident, the Host Unit or air attack base can request rotational use of all available airtankers. The air attack base or unit will initiate the request for rotation and route it through the ECC and GACC for consideration.

At no time will additional rotation airtankers exceed the number of airtankers originally allotted to be flying on the incident.

Each airtanker assigned to the incident will be issued its own "A" request number.

For airtanker rotation, reference the Interagency Airtanker Base Operations Guide (NFES 2271).
http://www.fs.fed.us/fire/aviation/aviation/av_library/index.html

Aircraft Diverts

Diverts

This divert policy applies to all incidents regardless of size.

All agencies should utilize the closest available airtanker on a new incident, except when the incident commander (IC) has a "no divert" in place.

No Divert

When the IC recognizes critical fire advances and has urgent need for continued air support for the *direct and immediate threat to life of a firefighter or a civilian* approaching fire front, the IC shall immediately contact their dispatch and request a "no divert" for a specified number of aircraft. The dispatch center will immediately notify the appropriate GACC via the intercom.

A life threat is not a justification for a blanket "no divert" for all aircraft on an incident. Incident personnel should assess the threat and request "no divert" for the number of aircraft necessary to assure safe egress from the threat.

Example: "On the Salt Fire, requesting a 'no divert' for two airtankers due to immediate life threat to firefighters and civilians"

The "no divert" status will be reevaluated every 30 minutes for its appropriate use by the dispatch's direct contact with the IC or Air Attack. When the critical phase has passed, the IC shall immediately advise the dispatch center and cancel the "no divert". The dispatch center will then contact the appropriate GACC over the intercom with the cancel.

Aircraft Flight Plan

For a sample of the Aircraft Flight Request form (FS 9400-1a), refer to the California Interagency Mobilization Guide Appendix A.

Federal

Reference Chapter 20 of the National Interagency Mobilization Guide or the agency Aviation Management Plan.

CAL FIRE

Only administrative flights require a flight plan.

Reference CAL FIRE Handbook 8100, procedure 400 and 406 and CAL FIRE Handbook 8300, policy 8324.2.

Air Communication

National Air Guard - 168.6250 MHz (Tx 110.9 Rx 110.9) - A National Interagency Air Guard frequency for government aircraft will be used for emergency aviation communications. Continuous monitoring of this frequency in narrowband mode is mandatory by Federal agency dispatch centers.

Restricted to the following use:

- Air-to-air emergency contact and coordination.
- Ground-to-air emergency contact.
- Air Guard Channel is not available for tactical frequency or use.

National Flight Following - 168.6500 MHz (Tx 110.9 Rx 110.9) is used to monitor interagency and contract aircraft. This frequency is used for flight following of official aircraft and is not intended to be used for tactical communications or incident operations. All Federal dispatch centers will monitor the National Flight Following frequency at all times.

Restricted to the following use:

- Flight following, the dispatching of local aircraft, and/or redirection of aircraft
- Air to Ground and Ground to Air administrative travel, **not** tactical communications
- **Not** authorized for ground to ground traffic

Pre-Assigned Aviation Frequencies

In order for aircraft communications to be manageable and functional, air frequencies are preassigned on a temporary basis to expedite initial attack but will remain under the control of the GACC. Occasionally the preassigned frequencies will have to be withdrawn from a Unit to serve multiple incidents on another Unit. In that event, alternative frequencies will be provided by the GACC.

A complete listing of pre-assigned frequencies can be obtained by contacting the Federal Aviation Coordinator at the GACC.

Requesting Additional Aircraft Frequencies

Initial Attack

When the aircraft communications load on an on-going incident is too congested to be handled by existing incident and air operations networks, temporary frequencies can be obtained. The IC should request additional frequencies.

Extended Attack

Extended Attack operations will be required to order new aviation frequencies allowing IA frequencies to be released.

The Unit will request the following frequencies from the GACC: Air to Air FM (Air Tactics), Air to Air AM (Victor) and Air to Ground (FM).

The GACC will be notified of all frequency releases.

Aircraft Flight Following

These procedures for flight following apply to all aircraft which move across Unit or Geographical boundaries. Flight following is the primary responsibility of the unit scheduling the flight (sending unit). The method to be used will be determined between the pilot and the dispatch office prior to departure. Receiving and intermediate units will only get involved in tracking the aircraft when requested by the sending unit or when the aircraft is overdue.

Once an aircraft has become airborne the flight manager/pilot will contact the ECC and relay the following information, this information will also be relayed when the aircraft is handed off to another unit for flight following responsibility

- Aircraft tail number/Call sign
- Number of souls on board
- Amount of fuel on board (hours/mins)
- Estimated flight time to destination and/or first fuel stop.
- Aircraft will advise on method of flight following (AFF is the preferred method).

Types of Approved Flight Following Methods

National Flight Following – Federal. Can be used for flight following of official aircraft and for aircraft dispatching and divert.

Automated Flight Following (AFF). AFF displays real time information regarding an aircraft's location, speed, heading, altitude, and flight history.

Federal: For more information on this see the National Interagency Mobilization Guide, Chapter 20.

CAL FIRE: Reference the CAL FIRE Handbook 8100, procedure 400.

Web link for AFF: <https://www.aff.gov/>

Radio check-in/check-out. Flight following requires verbal communication via radio every 15 minutes. The ECCs will log the aircraft call sign, latitude, longitude and heading.

Flight Following Responsibilities

Sending Unit

- Ensure that the flight crews are properly briefed on flight following procedures, responsibilities, and frequency. Flight follow the aircraft to its final destination. Advise the pilot of any exceptions to routine flight following procedures. Obtain ATD (Actual Time of Departure) from initial departure airport from pilot/vendor or chief-of-party.
- Communicate to local GACC through established ordering channels all aircraft flight plans which cross Unit or GACC Boundaries. All resources will advise the GACC of all aircraft movement. Make sure the sending dispatch telephone number appears on the flight plan.
- Notify GACC of any delays/advances of a flight plan exceeding 30 minutes.
- Initiate appropriate procedures for overdue/missing aircraft. Utilize agency Aircraft Search/Rescue Guides as appropriate and notify GACC of overdue aircraft.

CAL FIRE reference the CAL FIRE Handbook 8100, procedure 406 for aircraft accident/incident procedures.

Pilot

- Receive briefing of flight following procedures from sending ECC.
- File an FAA flight plan.
- Obtain and carry the sending ECC, GACC's and NICC's 24 hour telephone numbers.
- Contact sending ECC at time of initial departure and provide ATD.
- Contact sending ECC while enroute as directed.
- Call sending ECC upon arrival at destination.

Receiving Unit

- Notify the sending unit of any aircraft which has not arrived within 30 minutes of ETA.
- If problems are encountered contacting the sending unit, contact the GACC for assistance.

Sending GACC

- Forward flight plan information to the receiving GACC
- If flight crosses GACC boundaries outside of California, forward to NICC.
- Notify receiving GACC and NICC of any delays/advances of flight plan exceeding 30 minutes.
- Immediate notification to NICC when a Federal aircraft on GACC to GACC flight is overdue/missing.
- Immediate notification to CAL FIRE Region Duty Officer when a CAL FIRE aircraft is overdue/missing.
- Immediate notification to Forest Service Regional Aviation Safety Officer or respective DOI Aviation Managers when a Federal aircraft is overdue/missing.
- Coordinate with units/GACCs/NICC in searches for overdue/missing aircraft.

Receiving GACC

- Relay flight plans to all units affected by the flight plan through established dispatch channels.
- Notify intermediate or receiving units of any delays/advances of flight plan exceeding 30 minutes.
- Coordinate with intermediate or receiving units in searches for overdue/missing aircraft.

NICC

- Monitor federal flight plans for additional utilization.
- Coordinate with sending and receiving GACCs in searches for overdue/missing aircraft.

Aircraft Release

All aircraft users should anticipate that tactical aircraft could be reassigned to new incidents at any time, especially upon the completion of the current assignment.

At no time will supervisory aircraft or the ECC release positive control of any tactical aircraft until approved by the GACC. Flight following will be performed on all released tactical aircraft.

Units may release charter and CWN aircraft to the vendor without flight following, providing there are no federal passengers or cargo on board and will make notification to the GACC.

All airtankers will be released daily and reordered for next day's shift by 1900 hours, under a new request number.

All federal aerial supervision aircraft may remain on their original request number (A#) until released from the incident, diverted to another incident, or go on days off.

On State incidents, all (state and federal) aerial supervision aircraft will be released at the end of each day. They need to be reordered for next day's shift by 1900 hours, under a new request number.

Notification for Aircraft Accident or Incident With Serious Potential

Upon notification of an aircraft accident or incident with serious potential the following notifications will be made:

Federal

Unit - Immediately notify their Aviation Officer, Unit Duty Chief, Agency Administrator, and GACC Federal Aircraft Coordinator.

Federal Aircraft Coordinator – Notify the GACC Duty Officer, the Regional Aviation Safety Officer, the Regional Aviation Officer and NICC Coordinator-On-Duty (COD).

State

Unit - Notify through the Unit Duty Officer chain-of-command, the Unit Duty Chief

Unit Duty Chief - Notify through the Duty Chief chain-of-command, the Regional OCC Duty Chief, Sacramento Fire Protection Duty Chief and Tactical Air Operations Duty Officer.

Unit Duty Officer - Notify the Aviation Safety Officer via the Aviation Management Unit (AMU).

Reference the CAL FIRE Handbook 8100, procedure 406.

Air Tactical Supervision

Refer to the "Aerial Supervision Aircraft" chart at the end of this chapter for a listing of identifiers, locations, pilots and qualifications.

Aviation operations on an incident are often conducted under extremely adverse flight conditions such as congested airspace, reduced visibility, adverse weather conditions and mountainous terrain., all of which add to the complexity of aircraft operations over an incident. For Fire Traffic Area over an incident, refer to the California Interagency Mobilization Guide Appendix A.

Air Tactical Supervision Over an Incident.

Individual situations with their inherent complexities dictate the level of supervision required to safely and effectively conduct an aerial suppression operation. This section identifies levels of Air Tactical Supervision required over an incident and summarizes the intent of USFS, DOI and CAL FIRE manual directives. Reference the Interagency Aerial Supervision Guide.

Aerial Supervision Requirements

Aerial supervision requirements are defined by the Interagency Aerial Supervision Guide per the chart below. The following terms are used in the chart.

Required: Aerial supervisory resource(s) that shall be over the incident when air tactical operations are being conducted.

Ordered: Aerial supervisory resources shall be ordered by the appropriate controlling entity. (Air tactical operations may be continued while the aerial supervision resource is enroute to the incident or is on order. Operations can be continued if the resource is not available.)

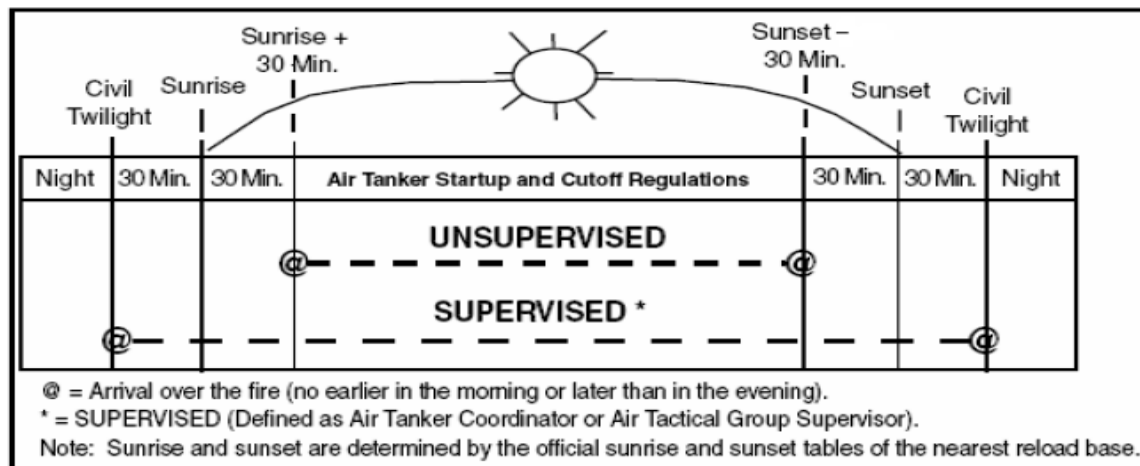
Over: The air tactical resource is flying above or is in a holding pattern adjacent to the incident.

Assigned To: Tactical resource allocated to an incident. The resource may be flying to and from, or on hold at a ground site.

Incident Aerial Supervision Requirements

When aerial supervision resources are co-located with retardant aircraft, they should be launched together on the initial order to maximize safety, effectiveness, and efficiency of incident operations. Incidents with 3 or more aircraft over/assigned to them should have aerial supervision over/assigned the incident. Federal policy dictates additional requirements as listed below.

Situation	Lead/ATCO/ASM	ATGS
Airtanker not IA rated.	Required	
MAFFS	MAFFS Endorsed Lead/ASM	
VLAT	VLAT Endorsed Lead/ASM	
When requested by airtanker, ATGS, Lead, ATCO, or ASM	Required	Required
Foreign Government airtankers.	Required if no ATGS	Required if no Lead/ATCO/ASM
Multi-engine airtanker: Retardant drops conducted between 30 minutes prior to, and 30 minutes after sunrise, or 30 minutes prior to sunset to 30 minutes after sunset.	Required if no ATGS	Required if no Lead/ATCO/ASM
Single engine airtanker (SEAT): SEATs are required to be “on the ground” by ½ hour after sunset.	See level 2 SEAT requirements	See level 2 SEAT requirements
Level 2 SEAT requirements: Level 2 rated SEAT operating over an incident with more than one other tactical aircraft on scene.	Required if no ATGS	Required if no Lead/ATCO/ASM
Retardant drops in congested/urban interface areas.	Order	May use if no Lead/ATCO/ASM
Periods of marginal weather, poor visibility or turbulence.	Order	Order



* The chart above does not apply to Night Aviation Operations.

Airtanker dispatch, use the official sunrise, start-up, cutoff, and sunset times of the Airtanker Base nearest the fire.

1 Aerial Supervision Module (ASM)

2 The ASM is a fixed wing platform that utilizes 2 crewmembers to perform the functions of traditional air attack and
 3 when necessary, performs low-level operations including Lead profiles. The ASM requires both crewmembers to be
 4 trained as a team, utilizing Crew Resource Management (CRM) skills and techniques to enhance safety, efficiency
 5 and effectiveness. Module operations require a fluid relationship between crewmembers that incorporates task
 6 sharing and coordination. The ASM provides aerial supervision in support of incident objectives.

8 An ASM is formed by pairing an ASM qualified Lead Pilot and an ASM qualified ATGS.

9 An ASM can perform Lead Plane duties and Air Attack duties at the same time.

11 National designators will be used to identify the operating agency and crewmembers.

12 For Forest Service ASM units, the Lead Plane call sign will be used and “Bravo” will replace “Lead”. For example:
 13 Bravo 5-2. For CAL FIRE ASM units, call sign “Charlie” will be used. BLM ASM’s have national call signs
 14 assigned.

16 All dispatching of Lead Planes/ASMs will be done by the GACCs. Normal ordering procedures will be followed.

18 There are three Forest Service Lead Planes/ASM assigned to California: One in Southern California GACC at
 19 Lancaster Fox Field, and two at the Northern California Service Center in Redding. They are staffed seven days a
 20 week during the summer months, and are available the rest of the year, pilot dependent. The GACC Federal Aircraft
 21 Coordinators will coordinate with the two Aviation Groups for the availability and assignments for all Federal
 22 Lead/ASM planes. Refer to end of this chapter for complete listing of pilots, locations, qualification and identifiers.

24 GACCs will be responsible for the Aircraft Flight Schedules, form 9400-1a, when needed for the aircraft.

26 CAL FIRE may, upon request, provide up to three (3) qualified Lead plane/Aerial Supervision modules. Minimum
 27 status includes MAFFS and VLAT lead qualifications.

29 Airtankers

31 Airtanker Standard ICS Types

33 ROSS Catalog Item	Capacity (Mimimum)	ICS Type
34 VLAT	5000+ gallons	1
35 1	3,000 to 4,999 gallons	1
36 2	1,800 to 2,999 gallons	2
37 3	800 to 1,799 gallons	3
38 4	up to 799 gallons	4

Very Large Airtanker (VLAT)

VLAT can only be reloaded at specific bases. They are identified in the “Airtanker Bases” chart at the end of this chapter.

DC-10/B-747:

These aircraft can be used on all lands in California and if available, may require up to 24 hours for activation. These aircraft are best utilized on rapidly emerging fires which are, or will be moving into the extended attack phase. Consider using the DC-10 (12,000 gallons) or B-747 (20,000 gallons) if you are anticipating continuous use of multiple Type 1 and Type 2 Airtankers.

Ordered in ROSS as: Airtanker, VLAT

Type 1 Airtanker**DC-7/ Lockheed L-188 Electra/C-130/BAE-146/RJ and MD-87:**

They can each carry a minimum of 3,000 gallons. The DC-7 and Electra are not approved for use within federal jurisdiction, unless it is a situation that requires immediate action to prevent the loss of life and property and has been authorized by the local Federal Line Officer or Regional Aviation Officer. This approval will be on a case by case basis. Any qualified Federal or State Lead Plane can lead the DC-7 or Electra.

Ordered in ROSS as: Airtanker, Type 1

Type 2 Airtanker**DC-6/P2-V:**

These aircraft can carry a minimum of 1,800 gallons.

Ordered in ROSS as: Airtanker, Type 2

Type 3 Airtanker**S2 Tracker/S2 Turbine Tracker/CL-215 and CL-415:**

These aircraft can carry a minimum of 800 gallons. The CL-215 and 415 are approved water scooping aircraft in California. The CL-215 carries 1,400 gallons maximum and the CL-415 carries 1600 gallons maximum.

Ordered in ROSS as: Airtanker, Type 3 (Multi-Engine)

Air Tractor AT-802 F:

Single engine airtanker capable of carrying 800 gallons.

Ordered in ROSS as: Airtanker, Type 3 (Single Engine)

Type 4 Airtanker**Air Tractor AT-802 and AT-602/Turbine Thrush/Turbine Dromader/Piston Dromader:**

These aircraft can carry a maximum of 799 gallons.

Ordered in ROSS as: Airtanker, Type 4 (Single Engine)

Federal Modular Airborne Firefighting Systems (MAFFS)/Airborne Firefighting System (AFFS)

MAFFS/AFFS are military transport aircraft reconfigured to deliver retardant. They are activated to augment and enhance contract and agency airtanker capabilities. The Air Force requests a 24 hour lead time, however, in some cases they can mobilize quicker.

Requests will be placed through normal dispatch channels in ROSS.

MAFFS/AFFS can only be reloaded at specific bases. They are identified in the “Airtanker Bases” chart at the end of this chapter.

CAL FIRE requests for MAFFS Activation follow CAL FIRE Handbook 8100 procedure 327.

Ordered in ROSS as: Airtanker, Type 1.

Smokejumper Aircraft

California Smokejumpers and aircraft are national resources, administered and managed by the GACCs. Priorities for their use are established nationally.

Region 5 maintains two smokejumper (para-cargo) fixed wing aircraft during the active fire season that are based at Redding. They are identified as “Jump 5-1” and “Jump 5-2”.

NOPS will determine the number of aircraft and Smokejumpers available for a given day.

Once on the ground, the smokejumper incident commander/crew leader will contact the ordering Unit or local incident commander and provide a situation report. Smokejumpers arrive at an incident with tools and supplies for 3 days of fire suppression activity. The smokejumper incident commander will contact the ordering Unit and arrange for incident demobilization.

Responsibility for arranging transportation of smokejumpers back to their base lies with the ordering unit. If problems arise, contact GACC for assistance. The GACC may be able to provide transportation for the Smokejumpers and their gear.

Satellite Bases

When smokejumpers are being deployed to SOPS, satellite bases may be activated. When a Unit in SOPS places the initial request for jumpers, the request will be placed to NOPS to fill; the SOPS Federal Aircraft Coordinator will then canvas other potential users to determine if there is a need to active a satellite base. When a SOPS satellite base is activated, a smokejumper liaison will be assigned by the NOPS smokejumper base. Potential SOPS satellite bases include, but are not limited to: Fresno, Porterville, San Bernardino, Stockton, Bishop and Santa Maria. Potential NOPS satellite bases include, but not limited to: South Lake Tahoe, Grass Valley, Chester, Siskiyou, and Rohnerville.

When there is an activation of a satellite base in SOPS jurisdictional area, the operational control of the satellite base will remain under SOPS. The smokejumper plane and the smokejumpers themselves will be hosted by SOPS and be requested on OSC preparedness/preposition order.

NOPS will fill all requests for smokejumpers, para-cargo, smokejumper/para-cargo aircraft, and necessary supplies for all smokejumper satellite base operations. NOPS smokejumper base will ensure that all satellite smokejumper bases are properly outfitted. Any additional orders for smokejumpers, para-cargo, supplies, and aircraft will be made through NOPS.

All requests from a SOPS Unit for smokejumpers when there is an activated satellite base will be processed through normal dispatch channels. All agencies will place the request for smokejumpers as an “A” number as “Load, Smokejumper, Initial Attack”, located under aircraft groups in ROSS.

Example: Fresno satellite base needs additional jumpers or equipment. The smokejumper liaison officer will contact the NOPS base and ask for additional jumpers or equipment. When the desired number of jumpers gets finalized, then NOPS aircraft coordinator will contact the designated person at SOPS and ask for the appropriate “O” numbers on the OSC order, to be placed with NOPS to be filled. If the request for additional jumpers cannot be fulfilled by the jumpers currently on base then NOPS may put in a request for boosters.

Satellite base resources; smokejumpers, supplies, and aircraft, will be demobilized through NOPS.

Para-Cargo Delivery

The Smokejumper Unit is charged with maintaining the para-cargo delivery system. The following information is needed to fill a para-cargo request:

- Desired Cargo
- Incident name, order number and “A” request number
- Location of drop zone (Legal or Latitude X Longitude)
- Ground contact
- Desired time of delivery

Almost all fire cache items can be delivered via para-cargo. In addition, special items such as fresh food, drinking water and sack lunches can also be delivered. Emergency medical care and rescue equipment can be delivered via para-cargo. The Smokejumper unit maintains two sled kits rigged for para-cargo delivery. Trauma kits with IV blood expanders, oxygen, splints and equipment to monitor vital signs are carried on the jumper aircraft and can be ordered. The trauma kit must be accompanied by a qualified member EMT of the Smokejumper Unit. IV starts must be administered by qualified EMT smokejumpers and only to U.S. Forest Service employees.

The time frames for delivery of para-cargo are dependent on the availability of requested items, aircraft, cargo riggers and cargo droppers. As a general rule, any fire cache items can be ready within two hours and special items within four hours. Orders placed after dark can be prepared at night and delivered at dawn.

Para-cargo weight capacities vary for aircraft assigned.

Infrared Aircraft

Infrared mapping services are available for use on any wildland fire activity and are obtained through the appropriate GACC in accordance with the National Infrared Operations Plan.

Requests to the GACC will be via ROSS and a completed Infrared Aircraft Scanner Request form, submitted on-line from the National Infrared Operations (NIROPS) website: <http://nirops.fs.fed.us/rcr/scanner>. If internet is unavailable, a faxed copy to the GACC will be accepted. Request(s) need to be received at the NICC by 1500 Mountain Time to be scheduled for that night's flight, which means they must be received by the GACC no later than 1345 Pacific Time.

For the Infrared Aircraft Scanner Request Form, refer to the California Interagency Mobilization Guide, Appendix A

A qualified Infrared Interpreter (IRIN) must be confirmed or in place at the time of the Infrared flight. Refer to the California Interagency Mobilization Guide Chapter 60, Specialized Overhead

Ordered in ROSS as: Service-Aviation; Service – Infrared Flight

Night Aviation Operations

Forest Service

The decision to have night operations in Southern California follows extensive analyses that indicate helicopter night operations can keep down the costs and risks of wildfires by helping keep fires small.

An Exclusive Use helicopter will be available during fire season 24-hours a day and an air attack platform will be staffed at night only for firefighting operations. The night helicopter operations will be based on the Angeles National Forest and will support wildfire suppression on Forest Service-protected lands, including communities and homes within and adjacent to the Angeles, Cleveland, and San Bernardino National Forests, and the southern half of the Los Padres National Forest. At night, the helicopter will be restricted to water dropping only.

Ordering will follow standard procedures.

ROSS order helicopter as: Helicopter, Type 2 Standard

ROSS order Air Attack as: Fixed Wing, Air Tactical

Cooperators

Cooperator helicopters can be used if proper agreements, approvals and procedures are in place.

Reference Interagency Aerial Supervision Guide.

Helicopters

Helicopter Standard ICS Types

Limited Helicopters (L): no passenger carrying, external cargo only.

Standard Helicopters (S): passenger carrying, internal cargo and external cargo.

Type*	Bucket size	Seats (including pilot)
1	700 gallons	16
2	300 gallons	10
3	100 gallons	5
4	75 gallons	3

* Type is based on bucket size and passenger capability.

Type 2S with crew is the standard IA helicopters

Type 3S with crew are additional IA helicopters

- A Host Unit may use their Type 3S helicopters on local IA response

Type 1L are Large Fire Support helicopters (LFS)

- These helicopters are primarily used as extended support of IA fires or in support of established large fires, not on standard IA response requests
- A Forest may use their Type 1L helicopter on local IA response
- If all Type 2S helicopters are committed, the GACC may go to a Forest with a Type 1L helicopters on an IA response

Air Rescue

CAL FIRE

All CAL FIRE helicopters can perform rescue operations. This capability is intended for use on incidents to rescue trapped or endangered firefighters and citizens when there is no other feasible alternative for evacuation.

National Park Service

NPS have 2 helicopters based at Yosemite National Park at Crane Flat (Type 2S helicopter) and Sequoia/Kings National Park at Ash Mountain (Type 3S helicopter). Both helicopters serve as the parks' primary rescue/life flight helicopter for life threatening emergencies and may not always be available.

Reference the DOI Helicopter Shorthaul Handbook: https://www.iat.gov/docs/HSHH_2010.pdf

For additional air rescue resources, reference the Interagency Helicopter Extraction Source List: [http://www.fs.fed.us/fire/aviation/av_library/Revision_6_EHE_Source_List\(03-12\).pdf](http://www.fs.fed.us/fire/aviation/av_library/Revision_6_EHE_Source_List(03-12).pdf)

Federal Helicopter Rappelling

Helicopter rappelling performed by qualified helitack modules can be utilized for a variety of missions where conventional means of delivering personnel by ground or by other aerial platform is prohibitive due to time, geographical features, or other environmental conditions. Either a booster or CWN rappeller can be ordered through normal dispatch channels.

Refer to the "Helicopter" chart at the end of this chapter for a listing of rappel qualified helicopters in California.

Ordered in ROSS as:

IA Load of Rappelers

Aircraft, Aircraft group, Load, Rappelers, IA

Booster Load of Rappelers

Overhead, HRAP

Rappel Helicopter

Aircraft, Helicopter, Helicopter Type, selected features, rappel capability

Firewatch Aerial Supervision Platforms

The USFS Firewatch Aerial Supervision Helicopter is a Bell 209 Cobra Helicopter converted for use as an aerial supervision and remote sensing intelligence gathering platform. There are currently two platforms in use in California, 507 and 509, refer to the “Aerial Supervision Aircraft” chart at the end of this chapter

Call signs for mission clarification:

- As air attack role, use the call sign “Air Attack”.
- As helicopter coordination role, use the call sign “HelCO”.
- As remote sensing intelligence gathering role, use the call sign “Firewatch”.

Order in ROSS as:

- For air attack role – Fixed Wing, Air Tactical
- For helicopter coordination role – Fixed Wing, Air Tactical or Helicopter, Type 3 Standard with special needs “Fire Watch helicopter”
- For remote sensing intelligence gathering role – Fixed Wing, Tactical or Helicopter, Type 3 Standard with special needs “Fire Watch helicopter”.

Project Helicopter – Forest Service

Request for helicopter services when the Forests local exclusive use helicopter is unavailable or the Forest does not have an exclusive use helicopter.

For Type 1 limited helicopter or Type 2 standard/limited helicopter requests will be passed up to NICC for processing. Requests for Type 3 helicopter are processed at the GACC.

When requesting a helicopter for a project this additional information needs to be included:

- Type of helicopter needed (make and model)
- Contact Name and Telephone number for Project Manager
- Contact Name and Telephone number for Helicopter Manager
- Approximate project length
- Fuel Truck, if needed
- Special pilot qualifications, if needed
- Other equipment as needed, long lines, nets, flotation devices, snow pads, etc.

A copy of the Commitment of Fund Obligation (FS-6500-224) and a copy of the Project Aviation Safety Plan also needs to be sent to dispatch and forwarded on to the GACC.

The GACC will either process the order, if it is for a Type 3 helicopter or place the order up to NICC. If the request needs to go to NICC then a copy for Commitment of Funds Obligation Form and the signature page of the Project Aviation Safety Plan will also be sent to NICC to be passed on to the contracting officer and the National Helicopter Specialist.

NICC will process the request by filling with an exclusive use helicopter with a modified contract or CWN helicopter.

Airspace Coordination

Fire Traffic Area (FTA)

FTA is the initial attack airspace structure over a wildland fire.

For examples of FTA reference www.airspacecoordination.net and refer to the California Interagency Mobilization Guide Appendix A.

Temporary Flight Restrictions, FAR 91.137 (TFR)

Temporary airspace restrictions will be established when incident related Aviation activities present potential conflict with other Aviation activities. The FAA requires that latitude/longitude information for TFRs (Temporary Flight Restrictions) must be provided in degrees, minutes, and seconds, including reference to north latitude and west longitude. If seconds’ information is not available, add two (2) zeros to the description. Do not use spaces, commas, or other symbols in the description. Example: ddmssN/ddmmssW or 450700N/1175005W. The corner

points should be listed in a clockwise sequence around the requested TFR to avoid “bow tie” depictions.

The Interagency Airspace Coordination Guide (located at www.airspacecoordination.net) describes further how flight restrictions are requested and implemented.

Units are responsible for initiating and cancelling all TFR requests, with a phone call and completion of the Interagency Request for Temporary Flight Restrictions form (FAR part 91.137), to the appropriate GACC, as well as processing request in ROSS. This form is located at: http://gacc.nifc.gov/oncc/logistics/aviation/docs/tfr_request.rtf and may be viewed in the California Interagency Mobilization Guide Appendix A. All violations must be reported immediately to the GACC.

GACCs are responsible for coordinating the issuance and cancellation of all requests with the FAA. The GACCs will process the local advisory NOTAM with FAA. During high incident activity an Airspace Coordinator may be requested. The GACC will contact the FAA-ARTCC, and military facility if applicable.

Media aircraft, medical aircraft and law enforcement aircraft are allowed in the TFR as long as they contact the air attack on the posted Air to Air frequency to request permission prior to entering the area and at what altitude.

Military Training Routes (MTR) and Special Use Airspace (SUA)

Military Training Routes and Special Use Airspace present conflicts with incident related aviation activities and will be identified by local Units. One source for this information is AP-1B, Flight Information Publication, “Military Training Routes.” Each ECC should download a current edition of the AP-1B. Instructions for access are available at www.airspacecoordination.net under “Airspace Coordination”.

Special Use Airspace may be found on Sectional Aeronautical Charts. Critical airspace information pertinent to flight should be organized for easy and rapid utilization; i.e., displayed on dispatching hazard. Special Use Airspace (SUA) includes Low Altitude Tactical Navigation Areas (LATN), Military Operations Areas (MOA), Restricted Areas (RA), Prohibited Areas (PA), Alert Areas (AA), Warning Areas (WA) and Controlled Firing Areas (CFA). Units may obtain operational agreements with the military units having control over any Special Use Airspace in their area and keep the military advised of all activities (fire and non-fire) that may be occurring inside these areas. Units will follow up with notification to the GACC. Further direction may be obtained in the Interagency Airspace Coordination Guide at www.airspacecoordination.net.

For deconfliction of Special Use Airspace, refer to the Documentation of Contacts Requesting Deconfliction of Airspace by the Military form in the California Interagency Mobilization Guide, Appendix A.

Incident Related

When air activities of an unplanned nature (i.e., fire or flood) occur that may conflict with an MTR or an SUA the GACC Aviation Coordinator will contact the responsible military originating or scheduling facility to notify them of the situation and gather information on whether the routes are active. Provide the following information:

1. MTR number and points along the route where incident is located.
2. Whether route needs to be closed or altitude adjusted so route can remain operational and safe.
3. Hours the restriction/change is to be in effect.
4. Temporary airspace restriction, TFR (91.137) is filed with the FAA. If a TFR has not been requested through the FAA, the request to the military is considered a voluntary cessation of activity(s); it is between the agency and the military. Any conflicts arising will need to be coordinated directly with the military as no FAA air space restriction has been violated. All conflicts should be reported on SAFECOM Report (or OAS-34), to Regional/State Aviation Safety Officer. CAL FIRE report on FC-119, reference CAL FIRE Handbook 8100, procedure 406.

Non-Incident Related

When a Unit schedules an air activity project that may conflict with a MTR, the GACCs Aircraft Coordinator will assist with the operating procedures and ensure that the use of the MTR is coordinated with the responsible military facility. The project needs must be made known to the GACCs Aircraft Coordinator at least two days prior to starting the project to allow time to coordinate with the military, so they may adjust their schedules if needed.

Temporary Airport Control Tower Operations

Requesting FAA Air Traffic Control Support - When aviation operations in support of an incident become too complex or unsafe at uncontrolled airports or helibases, the FAA may be requested to provide air traffic control

support.

GACCs within the FAA's Western Service Area (AK, AZ, CA, CO HI, ID, MT,NV, OR, UT, WA, and WY) may request FAA Air Traffic Control support through the Western Service Area Agreement or through a contract vendor. A lead time of 24 hours is desirable when ordering. If the FAA cannot supply radios, the incident COML will order radios as an Supply request through established ordering channels.

Requesting Units are required to provide full support and subsistence for FAA assigned personnel, as needed, per FAA Agreement.

- Ground/takeoff control problems.
- Approach control/landing problems.
- Where it is needed.
- Approximate duration of use.
- Contact person's name and phone number that will provide support and subsistence for FAA personnel.

Requesting Unit must complete and submit Temporary Airport Control Tower Form to the GACC:
http://gacc.nifc.gov/oncc/logistics/aviation/docs/temp_tower.doc

The GACC will contact the FAA's WSA Regional Operations Center (ROC) at 425-227-1999 and ask to speak to a duty officer regarding a Temporary Tower order. The ROC will connect the GACC with the appropriate FAA Duty officer. The ROC is the primary point of contact for the FAA for this request. The Temporary Tower Request Form along with the aircraft resource order will be forwarded to the FAA at the time of the request. In addition, there is a helpful checklist in Chapter 11 of the Interagency Airspace Coordination Guide that aids in the ordering and set up process of a temporary tower.

Ordering procedure is outlined within the current FAA agreement located at www.airspacecoordination.net.
Ordered in ROSS as: Service-Temporary Tower

Airspace Conflicts

Consult the Interagency Airspace Coordination Guide: www.airspacecoordination.net

Call When Needed (CWN) Aircraft

Call signs for CWN aircraft will be the last 3 numbers of the FAA tail number.

For the Passenger and Cargo Manifest Form for CWN flights, refer to California Interagency Mobilization Guide, Appendix A.

CAL FIRE

Unit ECCs are authorized to directly hire CWN aircraft: reference policies and rules of the current CAL FIRE 8300 Handbook, Section 8353. The current list of CWN aircraft is available on the CAL FIRE intranet.

If incident activity prohibits the ECC personnel from implementing the CWN hiring process, contact the GACC for assistance.

All payments are processed through the Unit's finance office utilizing the CAL FIRE 62 Emergency Aircraft Use Invoice.

Department of the Interior

A list of approved CWN aircraft and pilots is available via the Internet at: <http://oas.doi.gov/apmd/cwn/cwn.htm> and is maintained by the Office of Aviation Services (OAS). DOI agencies are required to use the OAS Source List when ordering and utilizing CWN aircraft and pilots.

All Type 3 CWN helicopters that are located within the administrative jurisdiction of a BLM District may be ordered by the appropriate ECC from the OAS Source List. The ordering Unit will order or provide a qualified helicopter manager and crew members.

CWN Helicopter Selection Factors:

- Closest forces
- Cost effectiveness
- Performance specifications for density altitude/high altitude operations
- Carded and contracted for local or emergency use
- Special applications such as helitorch, fixed tank, long line, etc.
- Daily availability based on expected duration of assignment and projected use

Type 1 and 2 helicopters are available under National Contract and will be requested through the GACC by ICS type and specifications.

CWN Inspection Criteria

All DOI helicopters are solicited and inspected by the OAS. The OAS and Forest Service will honor each other's inspection certifications. If the aircraft is not used immediately, it must be reinspected by the Project Inspector for contract compliance prior to use. This inspection includes checking all required equipment for installation and function. In addition, the log book will be reviewed to see that the aircraft has not been damaged and that it is in compliance with required inspections (10-hour, annual, etc.).

Forest Service

A listing of pilots and aircraft carded for the current year are kept at the GACC.

Forest Service requests for CWN aircraft will be placed to the appropriate GACC. The GACC will utilize the aircraft that best accomplishes the requested mission and provides maximum cost benefit.

The GACC will process requests for Federal Type 3 CWN helicopters directly with the vendor. Type 1 and 2 helicopters are available under National Contract and will be requested through the GACC by ICS type and specifications. For project or emergency hire the Unit must identify the manager's name in "Special Needs". The helicopter and manager will be married up at a non-fire incident location.

The GACC will process requests for Federal aircraft directly with the fixed wing vendor. Forest Service requests for CWN aircraft will be placed to the appropriate GACC. The Unit must identify the ATGS or aerial observer name in "Special Needs".

When the aircraft are being used for activities other than for fire detection the FAA registration number will be used as the call sign.

Forest Aviation Officers are responsible for insuring all Flight/Aircraft Use Report (FS 122s) are submitted into the ABS system for CWN aircraft used on their Forests. All payments will be processed through Aviation Business System (ABS) web site. CWN Managers are responsible for providing performance evaluation forms to the GACC Aviation Coordinator for payment management in ABS.

For all non-fire projects a copy of the Project Aviation Safety Plan needs to be provided to the Unit and GACC by the Project Manager.

CWN Helicopter Modules – Federal

Call When Needed (CWN) helicopters will be managed by a qualified module when assigned for incident use. For project work, a qualified helicopter manager (HMGB) will be assigned as a minimum on federally hired CWN helicopter contracts.

Module requirements:

HELICOPTER TYPE	FAA STANDARD/ TRANSPORT CATEGORY	FAA STANDARD Category Temporarily Designated for Limited Use	FAA Category Permanently Designated for Limited Use or FAA Restricted Category
1	Manager * plus four (4) Helicopter Crew Members**	Manager * Only	Manager * Only
2	Manager * plus three (3) Helicopter Crew Members	Manager * Only	Manager * Only
3	Manager * plus two (2) Helicopter Crew Members	Manager * Only	Manager * Only

*If the intended use is for Forest Service or DOI initial attack, the helicopter manager request must specify that a fitness level of arduous is required. Any other qualification requirements (ICT4, etc.) must also be specified in Special Needs. Remember to specify where the HMGB and helicopter are going to marry-up, also notated in Special Needs.

** Forest Service no longer allows passenger transport in Type 1 helicopters with the exception of authorized military helicopters.

Large Transport Aircraft – Federal

Large transport aircraft are used to mobilize and demobilize large volumes of overhead, crews, equipment and supplies nationally and internationally.

Large transport aircraft are National Resources and requests are filled at the national level (NICC) after the request has been initiated at the GACC, by the Aircraft Coordinator.

The GACCs will place these requests with NICC at least 48 hours before the flight is needed.

Airport Guide

The Pilots Guide to California Airports will be used in California. It is recommended that each Unit maintain their own copy(s) through the subscription process or have access to the internet site, due to continual updates.

Aircraft and Base Information Tables

AERIAL SUPERVISION AIRCRAFT

<u>AIR ATTACK</u>	<u>UNIT</u>	<u>BASE/FAA ICAO</u>
05	KNF	Siskiyou - SIY
06	LNF	Chester - O05
07	LPF	Santa Maria - SMX
12	BDF	San Bernardino - SBD
15	SNF	Fresno - FAT
17	TNF	Grass Valley - GOO
51	ANF	Fox Field - WJF
110	MEU	Ukiah - UKI
120	HUU	Rohnerville - FOT
140	LNU	Sonoma - STS
210	BTU	Chico - CIC
230	NEU	Grass Valley - GOO
240	RDD	Redding - RDD
310	RRU	Hemet/Ryan - HMT
330	MVU	Ramona - RNM
340	SLU	Paso Robles - PRB
410	TUU	Porterville - PTV
430	CDF	McClellan - MCC
440	TCU	Columbia - O22
460	BEU	Hollister - CVH
500	CDF	McClellan - MCC
501	CDF	McClellan - MCC
503	CDF	McClellan - MCC
504	CDF	McClellan - MCC
505	CDF	McClellan - MCC
507	ONC	Redding - RDD
509	OSC	Fox Field - WJF

<u>LEAD Number</u>	<u>Pilot</u>	<u>LOCATION</u>	<u>STATUS</u>
5-0	Vacant	Redding	
5-1	Vacant	Redding	
5-2	Mike Savage	Fox Field	Q/M/V
5-3	Vacant	Fox Field	
5-4	Wendy Gima	Redding	T
5-5	Travis Strahan	Redding	Q/M/V
5-6	Vacant	Redding	
5-7	Vacant	Fox Field	
5-8	Dave Spliethof	Redding	Q/M/S/V
5-9	Dan Johnson	Redding	Q/M/I/C/S/V
C-1	Robert Coward	CAL FIRE	Q/M/V
C-2	Lynn Flock	CAL FIRE	Q/M/V
C-3	Rick Haagenon	CAL FIRE	Q/M/V

Q = Qualified
I = Instructor

M = MAFFS Lead
S = Smokejumper Pilot

T = Trainee
H = Cobra Helicopter

C = Check Airman
V = VLAT Lead

AIRTANKER BASES

<u>BASES</u>	<u>AGENCY</u>	<u>A/C APPROVED*</u>
<u>Chester (O05)</u>	USFS	S2, L, S
<u>Chico (CIC)</u>	CAL FIRE	S2, L, M, S
<u>Columbia (O22)</u>	CAL FIRE	S2, S
<u>Fresno (FAT)</u>	USFS	S2, L, S, M
<u>Grass Valley (GOO)</u>	CAL FIRE	S2, S
<u>Hemet/Ryan (HMT)</u>	CAL FIRE	S2, S
<u>Hollister (CVH)</u>	CAL FIRE	S2, S
<u>Klamath Falls, OR (LMT)</u>	USFS	S2, L, S, M
<u>Lancaster (WJF)</u>	USFS	S2, L, S
<u>Paso Robles (PRB)</u>	CAL FIRE	S2, L, S, M
<u>Porterville (PTV)</u>	USFS/CAL FIRE	S2, L, S
<u>Ramona (RNM)</u>	CAL FIRE	S2, S
<u>Redding (RDD)</u>	CAL FIRE/USFS	S2, L, S
<u>Rohnerville (FOT)</u>	CAL FIRE	S2, L, S
<u>San Bernardino (SBD)</u>	USFS/BLM	S2, L, S, M, V
<u>Santa Maria (SMX)</u>	USFS	S2, L, S, M, V
<u>Sonoma (STS)</u>	CAL FIRE	S2, L, S
<u>Stead, NV (RTS)</u>	BLM	S2, L, S, M
<u>Ukiah (UKI)</u>	CAL FIRE	S2, S

RELOAD BASES

<u>Alturas (AAT)</u>	BLM	S
<u>Bishop (BIH)</u>	USFS/BLM	S2, L, S
<u>Brown Field (SDM)</u>	CAL FIRE	S2, L, S
<u>Castle (MER)</u>	USFS	S2, L, M, V, S
<u>Channel Islands (NTD)</u>	CAL FIRE	S2, L, M, S
<u>McClellan (MCC)</u>	CAL FIRE	S2, L, M, V, S
<u>Siskiyou (SIY)</u>	USFS	S2, L, S
<u>Victorville (VCV)</u>	CAL FIRE	S2, V

*Aircraft Approved Legend:

S2=CAL FIRE Air Tanker, L=Large Air Tanker (Federal), S=Single Engine Air Tanker (SEAT), M=MAFFS, V=Very Large Air Tanker (VLAT)

Additional reload bases may be approved.

MAFFS OPERATING BASES

<u>GACC</u>	<u>AIRPORT NAME</u>	<u>LOCATION</u>	<u>REMARKS</u>
Southern California	Castle	Merced	R/H
	Fox	Lancaster	R
	Fresno Air Terminal	Fresno	R limit 4 Aircraft
	NTD Channel Islands ANG	Ventura	H/F Portable Retardant Plant
	Paso Robles Base	Paso Robles	R
	San Bernardino International	San Bernardino	R/H/F Portable Retardant Plant
	Santa Maria	Santa Maria	R
Northern California	Chico	Chico	R
	McClellan ATB	Sacramento	H/F Portable Retardant Plant
Southern Oregon	Kingsley Field	Klamath Falls, OR	R/H/F
Western Great Basin	Reno/Stead	Reno, NV	R

R= Reload, H= Hubb, F=Full Activation

**Victorville (VCV) is currently under review as an additional base.

REFER TO MAFFS OPERATING PLAN for detailed information on MAFFS OPERATIONS at:
http://www.nwcg.gov/teams/ibpwt/documents/cooprelations/fs_maffs_guide.htm

Additional reload bases may be approved.

HELICOPTERS

Aircraft are assigned numbers and are prefixed in California with the word "Copter". Helicopters from other regions, may use the word "Helicopter".

FEDERAL

<u>Helicopter Number</u>	<u>Forest/Agency</u>	<u>Base</u>
502R	Klamath - KNF	Scott Valley – A30
503	Klamath - KNF	Happy Camp – 36S
506	Shasta - Trinity - SHF	Trinity – TRI
510	Lassen - LNF	Chester – 5Q2
512	Plumas - PNF	Quincy – QCY
514	Tahoe - TNF	Grass Valley – GOO
516	Eldorado - ENF	Pacific – PAC
517	Stanislaus - STF	Bald Mt – 76CA
520R	Sierra - SNF	Trimmer – TRM
522	Sequoia - SQF	Peppermint – PMT
523	Sequoia - SQF	Kernville – L05
525	Inyo - INF	Independence – 207
527	Los Padres - LPF	ArroyoGrande – ARG
528	Los Padres - LPF	Santa Ynez – IZA
530	Los Padres - LPF	Chuchupate – CHU
531N	Angeles - ANF	Palmdale – PMD
534	San Bernardino - BDF	Heaps Peak – HPS
535	San Bernardino - BDF	Keenwild – KEN
538	Cleveland - CNF	Ramona – RMN
551	Yosemite - YNP	Crane Flat – CFL
552	Sequoia NP - KNP	Ash Mountain – 2CA0
553	BLM Susanville - NOD	Ravendale – RAV
554	BLM CA Desert - CDD	Apple Valley – 10CA

R= Rappel N=Night Ops

<u>Heavy Bases</u>	<u>Forest/Agency</u>	<u>Base</u>
Type 1L	Angeles - ANF	Lancaster – WJF
Type 1L	San Bernardino - BDF	San Bernardino – SBD
Type 1L	Cleveland - CNF	Hemet/Ryan – HMT
	“	Ramona – RNM
Type 1L	Sierra – SNF	Fresno – FAT
	“	Mariposa – MPI
Type 1L	Los Padres - LPF	Casitas – CAS
Type 1L	Eldorado - ENF	Pacific – PAC
Type 1L	Lassen -LNF	Chester – 5Q2
Type 1L	Klamath - KNF	Siskiyou – SIY
Type 1L	Tahoe - TNF	Truckee – TRK
Type 1L	Sequoia – SQF	Porterville – PTV

CAL FIRE

<u>Helicopter Number</u>	<u>Agency/Unit</u>	<u>Base</u>
101	CAL FIRE Northern Ops - MEU	Howard Forest - HFS
102	CAL FIRE Northern Ops - HUU	Kneeland - O19
104	CAL FIRE Northern Ops - LNU	Boggs Mountain - BGS
106	CAL FIRE Northern Ops - SCU	Alma – ALM
202	CAL FIRE Northern Ops - LMU	Bieber - BBR
205	CAL FIRE Northern Ops - TGU	Vina - VNA
301	CAL FIRE Southern Ops - RRU	Hemet/Ryan - HMT
305	CAL FIRE Southern Ops - BDU	Prado - PDO
404	CAL FIRE Southern Ops - TCU	Columbia - O22
406	CAL FIRE Southern Ops - BEU	Bear Valley – BVH

CAL FIRE CONTRACT COUNTIES

<u>Helicopter Number</u>	<u>Agency/Unit</u>	<u>Base</u>
ORC 1 T2S	Orange County Fire – ORC	Fullerton - FUL
ORC 2 T2S	Orange County Fire – ORC	Fullerton - FUL
ORC 3 T2S	Orange County Fire – ORC	Fullerton - FUL
ORC 4 T2S	Orange County Fire – ORC	Fullerton - FUL
HT 739 T1L	Los Angeles County Fire – LAC	LAC helicopters rotate between three helibases:
Copter 15 T1S	Los Angeles County Fire – LAC	Brackett Field – POC
Copter 16 T1S	Los Angeles County Fire – LAC	Barton Heliport – PAI
Copter 19 T1S	Los Angeles County Fire – LAC	Camp 8 Heliport – CL72 (located in Malibu)
Copter 10 T2S	Los Angeles County Fire – LAC	
Copter 11 T2S	Los Angeles County Fire – LAC	
Copter 12 T2S	Los Angeles County Fire – LAC	
Copter 14 T2S	Los Angeles County Fire – LAC	
Copter 17 T2S	Los Angeles County Fire – LAC	
Copter 18 T2S	Los Angeles County Fire – LAC	
VNC 6 T2S	Ventura County Fire – VNC	Camarillo - CMA
VNC 7 T2S	Ventura County Fire – VNC	Camarillo - CMA
VNC 8 T2S	Ventura County Fire – VNC	Camarillo - CMA
VNC 9 T2S	Ventura County Fire – VNC	Camarillo - CMA
SBC 308 T2S	Santa Barbara County Fire – SBC	Santa Ynez - IZA
SBC 309 T2S	Santa Barbara County Fire – SBC	Santa Ynez - IZA
KRN 407 T2S	Kern County Fire – KRN	Keene Summit
KRN 408 T2S	Kern County Fire – KRN	Mettler Fire Station

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